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Commodity exports and Latin American development

José Miguel Benavente*

In the past, international cooperation in the area of commodities has been concentrated on measures to stabilize world prices through agreements between producers and consumers. At present, questions of the level and stability of world prices continue to be just as important as ever, but there are few possibilities of resuming international cooperation of this type. Furthermore, the level of final prices is only one of the problems related with production costs (which in turn depend on the technologies applied) and other aspects regarding the added value retained in the producer countries. The problems and opportunities that arise in this field are consequently very extensive and a better idea can be gained of them by looking at commodities within the context of the economy as a whole. Specifically, if it is desired to maximize the income obtained from the exploitation of natural resources for export and their contribution to economic development, there are four areas which are of special importance for the countries of Latin America in the present circumstances: technology, market access, marketing and processing. This article summarizes the special characteristics of the Latin American economies which make these four areas particularly important. These areas, whose close interlinkages make it difficult to try to attain improvements in one of them without also taking measures in the others, are dealt with successively in the following sections.

I
Distinctive features of the Latin American economies and their primary sectors

1. Natural resource endowment

Latin America is a vast continent richly endowed with natural resources. Often, past development strategies—particularly those based on import substitution—neglected the potential of this natural wealth, which is one of the major assets of the continent. The countries of the region produce virtually the whole range of major commodities traded internationally. However, Latin America displays certain differences from other commodity-exporting regions as regards the composition of its exports.

Compared with Africa, whose commodity exports are to a large extent composed of tropical beverages and minerals, and parts of Asia, which rely on exports of vegetable oils and cotton, Latin America has a diversified export structure with temperate-zone agricultural commodities accounting for a substantial share of regional exports (table 1). Food is the major commodity export group for Latin America, and together with ores and metals it is the group in which the region has the highest share of world exports (12% in 1988), although this share, like that of all other commodity groups, has declined significantly since 1955. The composition of commodity exports is important, among other things, because different categories of commodities face different barriers in import markets. This influences the participation of Latin American countries in international negotiations and explains, for example, why several such countries are members of the Cairns Group of agricultural exporters established in the context of the Uruguay Round of trade negotiations.¹

¹ The members of the Cairns Group are Argentina, Australia, Brazil, Canada, Chile, Colombia, Fiji, Hungary, Indonesia, Malaysia, New Zealand, Philippines, Thailand and Uruguay.
Table 1

LATIN AMERICA: STRUCTURE OF EXPORTS AND PARTICIPATION IN WORLD EXPORTS, BY MAJOR PRODUCT GROUPS
(Percentages)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Structure of exports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All food items</td>
<td>44.5</td>
<td>42.6</td>
<td>40.9</td>
<td>29.1</td>
<td>30.4</td>
</tr>
<tr>
<td>Agricultural raw materials</td>
<td>11.4</td>
<td>9.5</td>
<td>5.8</td>
<td>3.1</td>
<td>3.7</td>
</tr>
<tr>
<td>Ores and metals</td>
<td>10.8</td>
<td>12.5</td>
<td>17.7</td>
<td>9.5</td>
<td>11.3</td>
</tr>
<tr>
<td>Fuels</td>
<td>30.0</td>
<td>31.9</td>
<td>24.7</td>
<td>42.4</td>
<td>19.8</td>
</tr>
<tr>
<td>Manufactured goods</td>
<td>3.1</td>
<td>3.4</td>
<td>10.6</td>
<td>14.7</td>
<td>33.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Participation in world exports**

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All food items</td>
<td>20.5</td>
<td>17.5</td>
<td>15.7</td>
<td>14.2</td>
<td>12.0</td>
</tr>
<tr>
<td>Agricultural raw materials</td>
<td>8.9</td>
<td>7.0</td>
<td>5.6</td>
<td>4.6</td>
<td>4.0</td>
</tr>
<tr>
<td>Ores and metals</td>
<td>14.5</td>
<td>13.3</td>
<td>13.6</td>
<td>10.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Fuels</td>
<td>27.5</td>
<td>25.6</td>
<td>15.0</td>
<td>9.5</td>
<td>8.2</td>
</tr>
<tr>
<td>Manufactured goods</td>
<td>0.7</td>
<td>0.5</td>
<td>1.0</td>
<td>1.5</td>
<td>1.9</td>
</tr>
</tbody>
</table>


Table 2 shows the main commodities (other than petroleum) exported by Latin America. Some of them, such as orange juice, shrimps, temperate zone fruit and cut flowers, are of greater importance in Latin America than in other developing regions. Latin American countries are the world’s leading suppliers of coffee and bananas, as well as very important suppliers of products such as sugar, soybeans and oil, sunflower oil and oil cake, and ores and metals such as copper and bauxite. Generally speaking, exports of most individual commodities are concentrated in a few countries.

2. The nascent industrialization process

After having applied industrialization policies based on import substitution, many Latin American countries now have a solid manufacturing base which differentiates them from countries in Africa and large parts of Asia. Countries which are endowed with such a manufacturing base as well as rich natural resources are in a good position to optimally exploit their natural resources by taking advantage of the linkages between the commodity and manufacturing sectors. The existence of industrial infrastructure and an entrepreneurial mentality facilitates the process of incorporating technological innovations and adding value through processing in the commodity sector, thereby enhancing its contribution to the growth of the economy as a whole. In particular, the potential of the Latin American economies for incorporating technological progress would appear to be crucial for increasing the international competitiveness of their commodity exports.2

The above considerations lead to the more general notion that the role of commodities can be properly understood only by assessing the linkages between that sector and the rest of the economy, rather than looking at commodities in isolation.

2 The idea that greater international competitiveness must stem from the deliberate and systematic absorption of technical progress is explored in ECLAC, 1990a.
Table 2

LATIN AMERICA: MAJOR NON-OIL EXPORT COMMODITIES
(1986-1988 average)

<table>
<thead>
<tr>
<th>Commodities</th>
<th>Total Latin American exports (US$ million)</th>
<th>Percentage of world total</th>
<th>Main Latin American exporters^c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee (071.1)</td>
<td>6 872.9</td>
<td>56.9</td>
<td>Colombia (17.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Brazil (16.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mexico (5.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Guatemala (3.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>El Salvador (3.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Costa Rica (2.8%)</td>
</tr>
<tr>
<td>Sugar, raw and refined</td>
<td>5 717.6</td>
<td>56.0^b</td>
<td>Cuba (45.6%)</td>
</tr>
<tr>
<td>(061.1, 061.2)</td>
<td></td>
<td></td>
<td>Brazil (3.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dominican Republic (1.4%)</td>
</tr>
<tr>
<td>Fishery commodities^c</td>
<td>3 030.4^d</td>
<td>10.9</td>
<td>Chile (2.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mexico (1.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ecuador (1.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Peru (1.2%)</td>
</tr>
<tr>
<td>Copper, refined and unrefined</td>
<td>2 517.9</td>
<td>34.7</td>
<td>Chile (28.4%)</td>
</tr>
<tr>
<td>(682.11, 682.12)</td>
<td></td>
<td></td>
<td>Peru (5.8%)</td>
</tr>
<tr>
<td>Oils and fats</td>
<td>2 357.9</td>
<td>35.8</td>
<td>Brazil (20.2%)</td>
</tr>
<tr>
<td>(081.1, 081.3)</td>
<td></td>
<td></td>
<td>Argentina (15.1%)</td>
</tr>
<tr>
<td>Iron ore (281.5, 281.6)</td>
<td>2 118.6</td>
<td>29.8</td>
<td>Brazil (24.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Venezuela (3.4%)</td>
</tr>
<tr>
<td>Bananas (057.3)</td>
<td>1 372.8</td>
<td>72.1</td>
<td>Honduras (15.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ecuador (14.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Costa Rica (12.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Colombia (11.6%)</td>
</tr>
<tr>
<td>Aluminium (684.1)</td>
<td>1 314.0</td>
<td>11.3</td>
<td>Brazil (6.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Venezuela (3.7%)</td>
</tr>
<tr>
<td>Soya beans (222.2)</td>
<td>1 092.7</td>
<td>17.9</td>
<td>Brazil (8.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Argentina (7.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Paraguay (2.1%)</td>
</tr>
<tr>
<td>Fruit juices (058.5)</td>
<td>888.2^e</td>
<td>-</td>
<td>Brazil (802.7 mn)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Argentina (67.3 mn)</td>
</tr>
<tr>
<td>Bovine meat (011.1)</td>
<td>837.9</td>
<td>8.6</td>
<td>Brazil (2.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Argentina (2.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Uruguay (1.4%)</td>
</tr>
<tr>
<td>Tobacco^c</td>
<td>619.9</td>
<td>15.5</td>
<td>Brazil (11.2%)</td>
</tr>
<tr>
<td>Coarse grains^c ^f</td>
<td>605.7^g</td>
<td>5.4</td>
<td>Argentina (5.3%)</td>
</tr>
<tr>
<td>Commodities (SITC number)</td>
<td>Total Latin American exports (US$ million)</td>
<td>Percentage of world total</td>
<td>Main Latin American exporters(^a)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Copper ore (287.1)</td>
<td>604.4</td>
<td>25.7</td>
<td>Chile (14.9%)&lt;br&gt;Mexico (7.4%)</td>
</tr>
<tr>
<td>Chemical wood pulp (251.7)</td>
<td>582.9&lt;br&gt;328.5</td>
<td>-</td>
<td>Brazil (328.5 mn)&lt;br&gt;Chile (254.4 mn)</td>
</tr>
<tr>
<td>Silver (681.1)</td>
<td>571.5</td>
<td>-</td>
<td>Mexico (356.8 mn)&lt;br&gt;Peru (122.6 mn)&lt;br&gt;Chile (77.6 mn)&lt;br&gt;Bolivia (12.5 mn)</td>
</tr>
<tr>
<td>Alumina (287.32, 522.56)</td>
<td>544.4</td>
<td>19.0</td>
<td>Jamaica (8.6%)&lt;br&gt;Suriname (7.4%)</td>
</tr>
<tr>
<td>Soyabeans oil (423.2)</td>
<td>517.5</td>
<td>35.0</td>
<td>Argentina (18.5%)&lt;br&gt;Brazil (16.3%)</td>
</tr>
<tr>
<td>Cotton (263.1)</td>
<td>486.6</td>
<td>7.5</td>
<td>Paraguay (1.8%)&lt;br&gt;Mexico (1.4%)&lt;br&gt;Brazil (1.1%)</td>
</tr>
<tr>
<td>Cocoa products(^c)</td>
<td>459.5</td>
<td>23.1</td>
<td>Brazil (16.0%)&lt;br&gt;Ecuador (2.8%)</td>
</tr>
<tr>
<td>Cocoa beans (072.1)</td>
<td>449.4</td>
<td>15.2</td>
<td>Brazil (8.6%)</td>
</tr>
<tr>
<td>Wheat and wheat flour(^d)</td>
<td>399.0</td>
<td>2.8</td>
<td>Argentina (2.7%)</td>
</tr>
<tr>
<td>Extracts of coffee (071.2)</td>
<td>353.0</td>
<td>-</td>
<td>Brazil (275.5 mn)&lt;br&gt;Colombia (60.6 mn)&lt;br&gt;Ecuador (16.9 mn)</td>
</tr>
<tr>
<td>Sunflower seed oil (423.6)</td>
<td>307.8</td>
<td>33.1</td>
<td>Argentina (33.1%)</td>
</tr>
<tr>
<td>Bauxite (287.31)</td>
<td>294.5</td>
<td>32.6</td>
<td>Jamaica (11.4%)&lt;br&gt;Brazil (10.4%)</td>
</tr>
<tr>
<td>Grapes (057.51)</td>
<td>284.9</td>
<td>25.0</td>
<td>Chile (24.6%)</td>
</tr>
<tr>
<td>Tomatoes (054.4)</td>
<td>264.5</td>
<td>17.7</td>
<td>Mexico (17.4%)</td>
</tr>
</tbody>
</table>


\(^a\) Figures in brackets indicate percentage share of world exports or, when these are not available, value of exports in millions of U.S. dollars.

\(^b\) On the basis of physical tonnage, Latin America's share is 49%, with Cuba accounting for 23% of world exports, Brazil for 8%, and the Dominican Republic and Mexico for 2% each.

\(^c\) As defined in UNCTAD, *Commodity Yearbook 1990*.

\(^d\) Mostly shellfish (shrimps), exported mainly by Mexico, Ecuador and Brazil, and fishmeal, exported mainly by Chile and Peru.

\(^e\) Mostly orange juice.

\(^f\) Includes maize, barley, rye, oats and certain cereals.

\(^g\) Mostly maize.
3. New orientations in development policies

The linkages between the commodity sector and other sectors of the economy not only depend on technical factors (such as those underlying the technical coefficients of an input-output reverse matrix). To an important extent, they are also a function of the role that the commodity sector is called upon to play in the economy, which in turn is determined by the overall development strategy pursued by the country.

When import-substitution strategies focusing on the manufacturing sector were applied by many Latin American countries, commodity exports were seen mainly as providers of the foreign exchange needed to finance imports of those goods which could not be produced domestically. As from the 1980s, those strategies have tended to be replaced, in a growing number of Latin American countries, by policies aimed at liberalization of the economy and opening up to external markets. The emerging consensus in the region on the benefits of industrialization in the context of more open economies gives commodities an additional role: they now provide a base on which to build up processing activities that allow countries to combine international competitiveness based on natural resource advantages with industrialization. Such activities, because of their linkages with the rest of industry and services, not only heighten the value of resources, but also contribute to a process of technological and organizational change which strengthens competitiveness. The processing of commodities before export may therefore become a central element of the new economic development strategies now being adopted in the region.

4. Market dependency

Latin American commodity exports depend more than manufactures on the markets of developed countries: in 1986-1988, on average, those markets absorbed three-quarters of commodity sales but only two-thirds of total Latin American exports. The two main markets for the region are the United States and the European Economic Community (EEC). The EEC is of greater relative importance as a market for the region’s commodities, whereas the United States is the major market for the region’s exports of manufactures. Thus, in 1989, 33% of the region’s commodity exports went to the EEC and 22% to the United States, but in terms of total exports the order of importance was reversed: 38% went to the United States and 22% to the EEC.

The United States is, however, the main market for commodities exported by the Central American countries (with the exception of Nicaragua, although this could change in the future) and a few Caribbean countries such as the Bahamas. It also receives most of the commodity exports of Mexico and Ecuador. Most South American countries, as well as some Caribbean countries with traditional close trade links with the United Kingdom, depend more on the EEC as a market outlet for their commodities. Japan is the major market only for Venezuela, due to the importance of the latter’s aluminium exports.

Because of this market reliance, great importance is assumed for the region by events which may influence the current situation and future evolution of trade relations with the United States and the EEC, such as the establishment of the Single European Market in 1993 and the prospects for bilateral and multilateral trade agreements under the Enterprise for the Americas initiative launched by the President of the United States in June 1990.

In contrast, developing countries, including those of Latin America, are only of marginal importance as markets for Latin American commodities, except for some exported by Paraguay and, to a much lesser extent, by some other relatively small countries such as Uruguay, Bolivia and Trinidad and Tobago.
II

Processing

1. Commodity processing and economic development

Processing commodities not only adds value to export goods, thereby increasing export receipts, but may also perform a catalytic function in the development of systems of production, transport, marketing and financing, ultimately increasing competitiveness in the production of goods and services with a greater technological content and characterized by more rapid demand growth. As noted by ECLAC (1990a), two key components of the linkage of the natural resource sectors with industrial systems which would benefit from the intensification of processing activities are the capital goods industry (in particular, the manufacture of specialized equipment and machinery) and engineering services. Both sectors are crucial for developing the domestic manufacture of more complex goods.

An example which could be cited in the mining sector is that of the supply industry for copper mining in Chile, which has generated the capacity to manufacture new equipment—drilling machinery and parts, service machinery and machinery for loading ore, etc.—and other specialized industrial goods, as well as experienced and fully competitive engineering services for projects in this sector (ECLAC, 1989a). Likewise, examination of experience in various countries of the region shows that those industries which receive inputs from agriculture have played a central role in introducing technical progress in the agricultural sector itself.

In addition to these general considerations of a strategic nature, even in its initial stages commodity processing may have other important advantages, depending on the particular commodities involved. For example, it may facilitate transportation, as the processed products are generally less bulky than the unprocessed ones (as in the case of metals and many agricultural commodities like cocoa), it may facilitate stockpiling, as in the case of cocoa powder and butter, thus offering producing countries the opportunity to withdraw the product from export markets in periods of low prices; and it may help improve the negotiating position of producers, since the markets for processed goods are often more competitive than those for unprocessed ones, where there is a smaller number of buyers (as in the case of copper and other minerals).

Naturally, commodity processing is not economically feasible nor desirable in all cases. The availability of raw material in the country, for example, does not necessarily give a comparative advantage in processing, especially when the value of the raw material content is low compared with the value of the finished product (as for example in the case of tin ore in many final products and bauxite in aluminium). The merits of processing projects must be evaluated on a case-by-case basis, taking account of the advantages and disadvantages of the processing activities which are not reflected in the market prices. Appropriate incentives and policies need to be adopted in order to make returns correspond with social cost-benefit considerations.

2. Possibilities and limitations of commodity processing

A considerable proportion of Latin American commodities are exported in raw material form and processed abroad. In 1984, 64% of the total value of all agricultural commodities exported to OECD markets by the Latin American countries was accounted for by raw materials; semi-processed agricultural commodities accounted for only 16% of the total, and processed agricultural commodities for 20%. In the textile sector, exports of finished products only represented 22% of total exports. Exports of processed minerals represented a similar percentage of total exports of Latin American mining sector products (ECLAC, 1986a). The situation since then has not changed sufficiently to alter the conclusion that a great potential for processing export commodities exists in the Latin American countries. Specific processing opportunities were identified by ECLAC for the following major export
commodities: coffee, cocoa, soya, sugar, cotton, natural rubber, bauxite, copper, iron ore, and wood. A number of obstacles that prevented this potential from being fully realized were found, however.

One well-known explanation of the low level of commodity processing in Latin American producer countries is the lack of investment funds and, in many cases, the poor macroeconomic environment. Indeed, the massive financial gap during the 1980s was a decisive constraint on investment, as the region experienced an unprecedented outward transfer of resources. Rising external debt service, declining terms of trade, and in some countries a lack of sufficient incentives to retain domestic capital and attract foreign capital help explain the sharp drop in the region's net investment coefficient from nearly 23% of gross domestic product in 1980 to 16.5% in 1988.

Yet it is very likely that more private investment could have been attracted to specific processing projects for export, were it not for a number of serious obstacles that stood in the way of the economic viability of the projects. Prominent among them are obstacles arising in the marketing and distribution of the processed commodities, and in their access to markets.

The obstacles to marketing are examined in section III. These obstacles usually affect processed products in particular. There are obvious difficulties hindering the entry of new participants because of the market structures, for example, in the cases of soluble coffee and chocolate, where brand names play an important role and new entrants are faced with the need for long and expensive publicity and promotion campaigns to make inroads in the market, and also for minerals such as bauxite, where a large portion of the industry, although less so than in the past, is vertically integrated to the semi-manufacturing stage. In the case of minerals, the conditions attached to the provision of finance for new mine projects often hinder the possibility of undertaking smelting and refining in the producing country.

The progressive nature of the tariff structures of the importing countries and the non-tariff barriers analysed in section IV likewise limit processing in the producer countries. By far the largest number of voluntary export restraint agreements, for example, are in the commodity processing sector, affecting food products, textiles and clothing, steel products and footwear.

3. Promoting the further processing of commodities in the region

For countries wishing to expand the processing of their natural resources before export, domestic resource allocation policies having this objective may be supplemented and made more effective through action to attract capital to processing projects and to contribute to their economic viability by tackling the obstacles mentioned above, especially through the measures suggested in other sections of this article.

In view of the importance which foreign capital has and will continue to have in the financing of natural resource based activities, a large number of Latin American countries have been or are in the process of reviewing their investment codes and regulations in order to facilitate and encourage foreign investment. Although these measures are undoubtedly a necessary condition for the entry of foreign capital, it would seem clear that they are not of themselves sufficient. Experience indicates that investments in this sector materialize when there is a well-defined and stable long-term strategy for economic development and structural change, clearly spelling out the role assigned to the processing of the country's natural resources and its linkages with the rest of the economy.

Multilateral financial institutions can also play a very important catalytic role in mobilizing external capital for commodity processing projects. These institutions have the expertise required to organize and manage the various stages in the projects, even though they themselves may only contribute part of the capital. They can provide "seed money" to finance prefeasibility studies, submit such studies to potential investors and providers of finance, and help work out the arrangements setting in motion the subsequent stages of the projects.

This could lead to the setting up of joint processing ventures between investors of producing countries and foreign investors --whether regional or extraregional. The association with foreign capital could also take a number of other forms, the suitability of which would depend on the technical and economic characteristics of the projects envisaged. Such forms could include setting up companies with capital from several countries (multinational companies) and establishing part-
nership links with foreign processors in the countries where the projected output is going to be marketed.\(^4\)

This could allow advantage to be taken of existing regional complementarities in production, making use of existing installed capacity and of the technical complementarity existing between certain commodities in the manufacture of processed products. For example, in Brazil the capacity for soya processing substantially exceeds the domestic supply of the raw material, in contrast with the situation in Argentina and Paraguay, which are the other two major Latin American soya producers. Examples of technical complementarities are the use of sugar and cocoa in the production of chocolate; of natural and synthetic rubber in the manufacture of many rubber products; of tin and steel in the manufacture of tin plate, and of tin and various metals like lead, antimony, silver, etc., in the manufacture of tin alloys; of sulphuric acid (a by-product of copper production) and non-metallic minerals in the chemical industry, etc.

Promoting commodity processing through regional cooperation may well require a reassessment of past approaches to industrial integration (as in the case of the experience with industrial programming). Although the initiative for the establishment of joint ventures currently tends to be left to the business sector,\(^5\) intergovernmental cooperation can be instrumental in identifying specific investment opportunities, as for example by the systematic collection and dissemination of information on investment opportunities at the regional level, the identification of potential investment partners, project formulation and assessment, updated information on overseas investment and promotion policies, and the organization of investment-oriented business meetings.

III

Participation in marketing

1. The structure of Latin American commodity marketing

Whereas in the 1960s and 1970s commodity production in Latin America increasingly came under the control of domestically owned companies, the crucial marketing and distribution sector has to a considerable extent remained in the hands of foreign firms. Fuller participation by Latin American countries in marketing and distribution of their commodities would have clear advantages: it would allow the countries of the region to significantly increase their export earnings, because a substantial share of the income obtained from commodity exports is generated in the marketing and distribution stage, and it would permit closer contacts with final markets and enable producers to take advantage of valuable information feedbacks from consumers as regards the product quality and specifications, presentation and packaging, etc., best suited to consumer tastes.

The limited participation of Latin American producers in the marketing of their products is connected with the structure of international marketing. The greater part of international commodity trade takes place through the marketing networks of big manufacturing and trading companies (ECLAC, 1986d). In particular, the volume of intrafirm trade by vertically integrated manufacturing corporations seems to increase with the degree of commodity processing. This is borne out by an examination of United States trade with affiliated or related companies, with evidence to this effect found in the cases of cocoa beans, cocoa butter,\(^5\)

\(^4\) Examples of joint investment of this kind are the investments by Venezuelan aluminium producers in fabricating plants in Europe, and the setting up by Brazil's Companhia Vale do Rio Doce (CVRD), together with the Japanese Kawasaki company and United States firms, of a steel processing plant in California which is supplied with steel plates from Brazil. Some Mexican steel processing firms have been negotiating their inclusion in the scheme as suppliers for the plant.

\(^5\) Asian developing countries, for example, facilitate the participation of the business sector in their instruments for regional cooperation. It is interesting to note that in the Association of South East Asian Nations (ASEAN) integration always relied particularly on external markets, as is now the emerging trend in Latin America. For a comparative assessment of some key issues in the area of industrial cooperation in Latin America and ASEAN, see UNIDO (1988).
powder and chocolate; live animals, meat and meat preparations; hides and skins, leather and footwear; and wood in the rough, furniture and processed wood.

The substantial resources and better market information of large trading companies puts them in a favourable position compared with their competitors, enabling them to take maximum advantage of commodity exchanges (the main medium of price formation for a large number of commodities), both by using risk management techniques (hedging) and by their better ability to anticipate changes in quotations. As many of these firms operate with a wide range of commodities, they can reduce the high risks in commodity trade due to price volatility and fluctuations in exchange rates. They also have greater flexibility in conducting their business: for example, they often trade commodities for manufactures and engage in counter-trade and other operations of various types which enhance their bargaining position vis-à-vis their trading partners.

In contrast, Latin American export firms are, except in a few cases, small and more numerous. Because of their small size, they do not have the necessary resources to cope with the price fixing practices of the big companies, economies of scale, product differentiation, and the large outlays needed for the necessary advertising or for gaining full access to market information. This affects their sales strategies and conditions, whatever the sales mechanism used: direct contracts, auctions or commodity exchanges. Indeed, Latin American exporters are generally absent from the latter. Only some large sugar and cocoa traders of Brazil, the Dominican Republic and Ecuador, and copper producers and exporters of Chile, Peru, Mexico and Brazil, regularly conduct business in futures. This limited participation is due, inter alia, to the fact that the usual size of the futures contract unit is more than the entire output of most individual agricultural producers and many small and medium-sized firms in the mining sector. Any significant reduction in the size of the contract unit would probably make the costs of trading in futures too high, as the average costs of these operations decline quite steeply with the volume of transactions.6

Lack of control of marketing is also related to the low participation of producing countries in the transport of their commodities. Since freight rates often account for a substantial share of the CIF price (as high as 20% for many commodities), Latin American countries are foregoing a large part of the value added in the transport stage. The region accounts for only 20% of all dry bulk tonnage of developing countries, which in turn have only 15% of the world total. This lack of shipping capacity, combined with sometimes inefficient national shipping companies and lack of port infrastructure and equipment, also leads to delays and limited flexibility to organize and plan deliveries, as well as to inefficient use of cargo space. The fragmentation of the marketing sector accounts for the region's weak bargaining position when negotiating freight rates with shipping companies.

2. Possible joint marketing strategies

In view of this situation of fragmentation, the position of Latin American countries could be improved by the consolidation of their export business, which would call for cooperation among suppliers. Such cooperation could take various forms, such as sharing market information, cargo space, brokerage services, or marketing services; making combined purchases of the material inputs needed for marketing, such as packaging material; and making joint investments in representation and sales offices, joint publicity campaigns, etc. in final consumer markets. Possible arrangements in these areas range from informal consultative mechanisms to joint export ventures.7

Producers' export cooperatives can be an effective instrument in this regard. The banana exporting cooperatives in Colombia and Costa Rica illustrate the effectiveness of this mechanism in raising producers' participation in marketing in an industry traditionally dominated by three large transnational conglomerates. Another example is the coffee exporters' federation in Colombia. The rich experience with export cooperatives in Latin

6 See Regañaga, 1990a and b. Other studies carried out by ECLAC on these matters include: Mejía, 1990; López, 1990; Bande and Mardones, 1990, and ECLAC, 1990b.

7 The need for joint marketing arrangements among small and medium-sized mining firms in Latin America is analysed in ECLAC, 1987.
America (such as those existing for various fruits and vegetables in Brazil, Chile, Guatemala and Honduras; for sugar and milk in Uruguay, etc.) could provide a base for expanding activities to international marketing. In some cases, a process of increasing cooperation could culminate in the establishment of multi-country Latin American commodity trading companies, preferably dealing in several commodities. This is an ambitious objective, however, and the Latin American record of operation of single-commodity, multi-country trading companies is not encouraging.

Where individual exporters' sales are too small to use hedging economically on commodity exchanges, they could reduce their risks through cooperative hedging schemes. By acting together, exporters of the same commodity could be jointly represented on the boards and relevant committees of the exchanges and see to it that the best interests of their industries are reflected in contract specifications, delivery rules, trading hours, and other institutional matters concerning exchange operation. This is particularly necessary in the case of perishable commodities, which face standardization problems more than metals do. At the same time, subregional economic integration could help to remove the obstacles to the establishment of regional commodity exchanges for certain products, such as are now envisaged, particularly for those commodities where subregional and regional demand is important. Such exchanges could help increase intra-regional trade (ECLAC, 1991a).

Private business cooperation in the field of marketing would be helped by government support at both the national and regional level. At the national level, such support could take various forms, including financial support when economically justified (for example, foreign exchange backing for margin calls to firms engaging in futures operations); the provision of services, including advice and information; and incentives in the context of domestic policies and regulations. At the regional level, cooperation among governments is needed in order to establish a common legal and institutional framework where individual companies can engage in fruitful contacts; such a legal framework should include matters such as national investment codes and regulations, export regimes, etc. Other fields for intergovernmental cooperation are market information and the training of the staff of exporting firms and governments in marketing techniques and strategies. Intergovernmental organizations such as UNCTAD have a clear mandate to promote actions in these two areas, and such actions would be considerably enhanced by the provision of financial support from the United Nations Development Programme (UNDP) and other sources of development finance. The large Latin American trading and exporting firms could also help their smaller counterparts, particularly in the field of on-the-job training.

IV

Market access

1. Trade barriers in developed countries

Latin American commodity exports are affected by various tariff and non-tariff restrictions at the borders of the main markets. Within these restrictions, tariffs are in many cases low or non-existent, but market access is nevertheless effectively controlled by non-tariff measures. The restrictions applied in the markets of the United States, the EEC and Japan are summarized below.

a) Tariffs

The tariff structures of these countries have various rates, applicable to different products. The rates are high for many agricultural products, and they generally show a tendency to be progressive, that is to say, they escalate with the degree of processing, giving rise to higher levels of effective protection for processed products than are indicated by the nominal rates. Such protection hinders
processing of these commodities in producing countries (UNCTAD, 1989). The negative impact of high tariffs on Latin American exports is attenuated, however, by the preferential access granted to many products under various systems of preferences.

The United States, the EEC and Japan give preferential treatment under the Generalized System of Preferences (GSP) to many commodities in raw and processed forms, the list of which is periodically modified, and such preferences are given to all the Latin American countries except Bermuda, Cuba, Nicaragua and Paraguay, which are excluded from the United States system. All United States GSP rates are zero. In other countries, rates applying to raw commodities are only significant in the cases of meat, coffee and tobacco in the EEC, and meat and grains in Japan. However, many products of interest to Latin American exporters (for example, fish, dairy products, grains, vegetables and fresh fruit, particularly seasonal fruit) are excluded from the system, and there is some degree of tariff escalation. This is so in the case of the GSP rates applied by the EEC and Japan to meat, fish, leather, cocoa and tropical fruit, and by the EEC to coffee, tobacco and sisal.

The English-speaking Caribbean countries have also been granted preferential access to the EEC market under successive Lomé Conventions between the EEC and the ACP (Africa, Caribbean and Pacific) countries. Tariff rates applied to eligible products are low or zero, but some tariff escalation exists for coffee, vegetable oil and tropical fruit. In addition, most imports from these countries (except Suriname), as well as those from some other Caribbean island countries and from Costa Rica, El Salvador, Guatemala, Guyana, Honduras and Panama, can enter the United States market duty-free under the Caribbean Basin Initiative (CBI). This treatment, which was initially for a 12-year period, is now indefinite. Commodities from these countries benefitting from duty-free access under the CBI but not the GSP include sugar cane, beef and veal, and certain fruit, flowers and tobacco products. But key industries such as canned tuna fish, footwear, certain leather and oil products, and textiles and clothing are excluded (clothing from fabric made in the United States is admitted under strict quotas). Sugar is admitted duty-free under the GSP and the CBI within the limits of country quotas, above which high, prohibitive tariffs are applied.

Duty-free access similar to that granted under the CBI is now envisaged for Bolivia, Colombia, Ecuador and Peru. GSP benefits applying to these countries had previously been extended by an Andean trade package to a number of additional products, including processed seafood, certain fruits and vegetables, wood, rugs and certain cotton products. Exports of some commodities from the four Andean countries are also granted preferences in the EEC in an effort to encourage diversification away from coca production.

b) Non-tariff barriers

A high proportion of Latin American commodity exports are affected by non-tariff measures which limit their access to some or all of the major markets. Taking the commodity trade by major product groups, food products are affected in all three markets (the United States, the EEC and Japan); oilseeds and vegetable oils, mainly in the United States and Japanese markets; agricultural raw materials in the United States; and iron and steel in the United States and the EEC. Processed commodities such as textiles, clothing and footwear are also greatly affected. Taking into account the composition of the exports of the various Latin American countries, in the food sector imports from Argentina, Chile and Uruguay are most seriously affected; in iron and steel, those from Argentina and Brazil; in textile products, those from Mexico, Uruguay, Peru and Venezuela; and in clothing, those from Colombia, Venezuela and Mexico (Gonçalvez, 1987, pp. 452 and 455).

The non-tariff measures most commonly encountered by Latin American commodities are quantitative restrictions (including voluntary export restraint agreements). But there is a wide array of other measures, too. In the agricultural sector, for example, meat, dairy products, sugar, tobacco, fruit and vegetables are most often affected by import quotas (global and bilateral), seasonal tariffs and quotas, discretionary import licensing, State monopoly of imports, sanitary and phytosanitary regulations, and outright prohibitions. Variable levies are also applied to ensure that the imported products are sold at prices not lower than the domestically produced equivalents. Although the significance of these barriers is less obvious than that of tariff barriers, it should not be underestimated.

In the extreme case of sugar, for example, the tariff
equivalent of the import quotas imposed by the region's major industrial trade partners, as estimated by the US International Trade Commission, amounted to 102% in the case of the United States, 170% in the EEC, and 360% in Japan (United States, International Trade Commission, 1990a and b). But such border measures are only one component of the elaborate system of protection of agricultural producers in developed countries. Producer support schemes and large-scale export subsidies are the other two components which lead to the well-known situation in world markets, where excess supply of subsidized agricultural products depresses prices and displaces Latin American and other countries' exports of these products.

Regarding tropical products, anti-dumping and countervailing actions as well as quantitative restrictions are applied to flowers, plants and spices. Tropical fruits (including bananas) and nuts are subject to quantitative restrictions as well as taxes and other charges. Internal fiscal charges on sugar and selective taxes on bananas and tropical beverages such as coffee and cocoa are significant in certain countries. In the iron and steel sector, a combination of non-tariff measures is applied: principally voluntary export restraints, basic import prices, anti-dumping actions and surveillance measures. In 1986, nearly half of Latin American exports of these products to industrialized countries were thus affected. Other minerals, ores and metals face anti-dumping actions in the EEC and the United States. In addition, some products are subject to national quantitative restrictions or surveillance measures in individual EEC member States. In the textile sector, the restrictions imposed under the Multifibres Agreement affected around 64% of Latin American exports of textiles and clothing to developed countries in 1986.

2. Trade barriers in Latin America and other developing regions

In developing countries, market access barriers are generally high. An examination of tariffs and para-tariffs in 50 developing countries showed that in 1986 the import-weighted average of all import charges (tariffs and para-tariffs) in these countries was 30%. In Latin America, the level of protection was much higher: 66% in Central America and 51% in South America (but only 17% in the Caribbean). When major product groups were considered, it was found that manufactures faced the highest levels of tariff and para-tariff protection in the overall group of 50 countries. Foodstuffs came in second place, with a weighted average total import charge for all the countries covered by the survey of 30%. The average was 21% for agricultural raw materials, 19% for ores and metals and 16% for mineral fuels. For Latin American countries, the corresponding averages were much higher, reaching 64% on foodstuffs in Central America.

In the study in question, 40% of products were found to be affected by at least one non-tariff measure in all the countries in the sample. The most frequent non-tariff measures were quantitative restrictions, which affected 24% of all tariff lines. The second measures in importance were advance import deposit requirements, which affected 21% of products. Foreign exchange authorization by the Central Bank affected 6% of the tariff lines on average. In certain countries, however, particularly in Central America, all products were subject either to this constraint or to advance import deposits. Across regions, a pattern similar to that existing in the case of tariffs was found. The Caribbean countries were among those having relatively liberal trade regimes in this context, whereas South America was one of the most protective regions. Although these findings refer to all imports, they apply equally to the primary commodity sector.

The wide application of non-tariff measures to commodity imports in Latin American countries is also borne out by the findings of another study on the members of the Latin American Integration Association (ALADI) (Valenzuela, 1988). This study found that every major commodity is subject to non-tariff measures in some ALADI country. In 1988, Brazil, Colombia, Peru and Venezuela applied non-tariff measures to most commodities. Next in line came Mexico and Ecuador, with considerable import product coverage by such measures. Chile was in an intermediate position, while Paraguay, Argentina, Bolivia and Uruguay
had only limited recourse to non-tariff measures. In the year covered by the study, non-tariff restrictions were particularly important for such products as wheat, maize, powdered milk, rice, soya, soya oil, raw and refined sugar, petroleum products, some iron and steel products, fish, shellfish, butter, coffee, apples, pears and cotton. It should be noted, however, that many Latin American countries have undertaken significant opening-up of their import trade or are in the process of doing so.

3. Some conclusions

Trade liberalization in the markets of both developed and developing countries can contribute significantly to the expansion of many types of commodity trade. In view of the widespread use of non-tariff measures rather than tariffs to control imports, the reduction of tariffs alone would not lead to a significant increase in market access for commodities. Furthermore, if such a reduction were applied to most-favoured-nation rates, it could lead to a worsening of market access in some cases. This is because of the different trade regimes and degrees of tariff preference applied to different products and countries in the case of Latin America. Liberalization on a most-favoured-nation basis implies an erosion of these preferences.

This is well illustrated by the potential impact of offers of tariff concessions on tropical products made by developed countries during the Uruguay Round up to August 1990. According to UNCTAD estimates, the industrialized countries themselves would be the major beneficiaries of these offers (UNCTAD, 1990a). In the case of Latin American countries, exports to the United States would actually fall, although these losses would be more than offset by increased exports to other countries, mainly the EEC. Caribbean exporters to the EEC would suffer trade losses for this reason, however. Other UNCTAD estimates of the trade effects of a 50% reduction in most-favoured-nation tariffs on natural-resource-based products yielded similar results (UNCTAD, 1990b). Another particular case would be the situation of the net food importing countries, which might suffer losses in the short term from liberalization of agricultural trade.

This diversity of interests has important policy implications. Bargaining power would be increased and trade liberalization prospects enhanced if affected countries were able to negotiate collectively as a bloc, rather than individually. But developing a common stance is hindered by the potentially uneven distribution of benefits from trade liberalization.

In these circumstances, developing collective positions might be easier if the following considerations were taken into account.

Firstly, many analysts have noted the risks involved for developing countries in preferential systems which make them dependent on the goodwill of certain developed countries. For example, GSP benefits can be removed at the discretion of the countries granting them. They do not apply to many products of particular interest to Latin American countries, nor to non-tariff measures, which are more important obstacles to trade. Although the EEC’s Lomé Convention is an improvement over the GSP, product coverage is still limited, and market access (outside the traditional export products) is restricted. There is little or no incentive to move up the product ladder from raw materials into semi-manufactured and manufactured products. Eligible countries may benefit from quota rents, but the role of dynamic comparative advantages is denied (Valdés and Zietz, 1990, pp. 7 and 8). The value of the Choi has been considerably increased by the recent decision to prolong the duration of the preferences given under it indefinitely, but as indicated above, important products continue to be excluded. In short, these disadvantages—which may become more apparent in the longer term—should be considered by decision makers along with the more likely short-term advantages of existing preferences when assessing trade liberalization.

Secondly, the diversity of interests of the Latin American countries may be reconciled within the framework of a generalized liberalization process covering a wide range of commodities, with special emphasis on the elimination of non-tariff barriers. Such an approach has made possible wide participation in the Uruguay Round based on the principle of globality, whereby concessions granted by a country in particular sectors may be more than offset by the advantages achieved in others.
V

The technological challenge

Technology has always played a leading role in economic development. Its effects make themselves felt in both the supply and demand of the commodities exported by Latin America. Some of these changes are well known and have been amply documented (ECLAC, 1989b and c).

1. The impact of technological change on production

Recent advances in production technologies have changed the patterns of international competitiveness.

Some producers have been able to use technological innovations to their advantage and thus counter the comparative advantages previously held by their competitors. This has been particularly clear in the mining and metalworking sectors. In these sectors, most of the new technologies currently in use emerged or were improved during the last decade, with the aim of saving energy in response to successive oil price rises, reducing operating costs and improving quality in order to face competitive imports. Producers introducing these innovations, particularly in developed countries, have been able to narrow their production cost differentials with Latin American producers who had long held a comparative advantage based on factors such as low labour costs and high-grade ores.

In agriculture, various studies on the region support the view that the use of non-traditional inputs and technological changes have played a much more important role in raising output in this sector than other factors such as increases in acreage and manpower (FAO, 1989, pp. 47-48). Since the 1970s, the effects of the "Green Revolution" based on the adoption of high-yielding varieties of rice, wheat, maize and other crops, together with increased use of inorganic fertilizers and irrigation, have been felt particularly strongly. At present, the hopes of achieving further increases in productivity, both in Latin America and in other parts of the world, are based on the research underway in the field of biotechnology, which has been given strong impetus by recent advances in such areas as genetic engineering, tissue culture and clonal propagation. The biotechnological revolution holds promise of a reduction in the dependence on agro-chemical inputs, leading to substantial cost reductions, a wider variety of goods suited to local production conditions and nutritional requirements, and a shorter time lag in the development and adoption of new varieties than in the case of the Green Revolution.

But on the other hand, a feature of the new biotechnologies which differentiates them from the Green Revolution is their predominantly private character. Whereas the major initiators of that revolution were public or quasi-public research organizations, biotechnological research is to a large extent conducted by transnational corporations.

The returns on this research are private and the results are in keeping with the needs and interests of the owners. This involves certain risks for Latin American agricultural producers. Among these are the introduction of varieties whose cultivation calls for an increase in capital inputs together with a corresponding decrease in labour needs (as for example through the introduction of varieties with characteristics facilitating mechanical harvesting); the transfer of production to other geographical areas as varieties are introduced which can be cultivated in different climates; genetic uniformity, which makes plants highly susceptible to disease and pests; overproduction, and lower prices, from which only the largest producers who can afford to adopt the new varieties are likely to survive.

Moreover, some large agricultural and chemical conglomerates are engaged in research on new seeds which are tolerant to the herbicides produced.

9 In the case of copper, for example, United States producers were able to cut average production costs from 85 US cents per pound in 1982 to 50 cents in 1989 (average production costs for Chile's State-owned CODELCO, the largest Latin American copper producer, are running at about 40 US cents per pound) Latin American Commodities Report, 6 June 1990.

10 For an analysis of the structure and production characteristics of the biotechnology industry, see Centre on Transnational Corporations (CITC), 1988.

11 In the case of coffee, for example, these risks are examined in Rural Advancement Fund International (RAFI), 1989.
by those same companies. It has been argued that, aside from environmental considerations, these kinds of plant varieties keep farmers dependent on the use of certain chemicals, thereby providing a captive market for the agricultural companies manufacturing the herbicides.

Some Latin American countries have successfully developed substantial research capacity in the field of biotechnology. This is illustrated by the operation of a number of highly capable organizations and programmes (such as the Genetic Engineering and Biotecnology Centre in Cuba, the National Institute for Agricultural Technology in Argentina, the Research Centre for Genetic Engineering and Biotecnology in Mexico and the Brazilian National Biotechnology Programme) as well as research centres operated by private firms.

2. The impact of technological change on demand

Demand for commodities has been affected both by the substitution of traditional categories of raw materials by new materials and by the reduction in the amount of raw materials used because of improvements in production processes and downsizing of the finished products. The aggregate effect of such changes is reflected in variations in the physical amount of raw material necessary to produce a unit of output. This amount has been termed the intensity of use of the raw material.

Studies on the evolution of the intensity of use suggest that for individual materials and countries, this intensity rises up to a certain threshold and then shows a declining trend as the economy matures. The evolution observed in the use of raw materials in the industrialized countries fits into this pattern. The same evolution could take place in the developing countries, where raw material use is currently increasing, but the intensity of use in these countries could be lower than that normally corresponding to their level of economic development, since they may be able to leapfrog the material-intensive stages of industrialization by adopting more up-to-date material-saving technologies.

In spite of these general trends, some traditional raw materials have regained ground lost to competitors, thanks to efforts undertaken by their producers (the cases of wool, cotton, natural rubber and aluminium are illustrative). In addition, some end-uses have registered important improvements in intensity (e.g., the use of copper in the electrical and electronic sectors). This underscores the importance of systematic research and development for the purpose of finding new uses and products.

3. The need to adapt to technological change

In order to cope successfully with the demands of technological change it is essential to apply measures to counter its negative impact and take the fullest advantage of the possibilities it offers for improving competitiveness.

A first requirement is the monitoring, on a continuous basis, of technological research and innovations everywhere in the world which have the potential for affecting commodities. This sort of information should provide an essential input for designing policies affecting the commodity sector (e.g., regarding pricing and diversification). Given the common interest of all producers of the same commodity in this information and the usual difficulty in obtaining it (companies are usually willing to share only general information about their research), the task of monitoring would be best undertaken, for each individual commodity, by organizations grouping together either producers or both producers and consumers.

Secondly, the importance of selective research and development activities aimed at finding new uses and increasing the international competitiveness of exports is illustrated by the opposite fates suffered by aluminium, which has displaced other products in many applications, and tin, which has itself been displaced. In the aluminium industry, companies like ALCOA and ALCAN spend over US$100 million per year on research and promotion, latterly concentrated on end-products. In contrast, research on the new and traditional applications of tin has mostly been carried out by the International Tin Research Institute (ITRI).

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12 Research is currently underway on various crops such as soya, tobacco, tomatoes, cereals, forest trees, sugar beet and potatoes. The research on cotton has already given successful results.

13 In Latin America, for example, the producers' organizations UPER and GEPLACAPA currently monitor development in technologies affecting bananas and sugar, respectively.
which has an annual budget of less than US$5 million. With regard to competitiveness, empirical studies on developed countries have shown that in commodity-based industries such as food, textiles, wood, paper and mining, the correlation between increased productivity and research and development spending is greater than in other industries (Eglander, Evenson and Hanazaki, 1988, and Benavente, 1989, pp. 177-213).

Since research and development resources are not unlimited, they must be used in such a way as to achieve maximum efficiency, especially in countries which lack a "critical mass" of the human and financial resources needed for research. This could be achieved, first of all, by collecting and using these resources jointly at the subregional or regional level, through some public or private multinational organization which carries out research for the benefit of all producers. Secondly, it is essential that there should be strict allocation of resources on the basis of a technical analysis of the best opportunities; this often means that it is desirable to stimulate the transfer, dissemination and adaptation of technical advances already made in other countries. This can be achieved through the direct purchase of foreign technology, but it can also be obtained through foreign direct investment. The link between technology and investment is confirmed by examination of the innovations introduced in the mining and metallurgical sector in recent years, which shows that the main limitations on the adoption of many new technologies, at least in the primary processing stage of the metals industries, are due not so much to their complexity and lack of accessibility as to the need to incur large capital outlays. Therefore, forms of foreign investment should be promoted which make an effective contribution to the technological and managerial capabilities of the recipient economies.

However, in many cases local technological efforts are still required in order to adapt imported technology to local conditions or to promote technological innovation in selected activities and areas where such innovation is not simply a matter of imitation. For these reasons, research and development activities should be placed high in the ranking of priorities for development financing.

A third line of action is to seek access to new markets. A gradual expansion of commodity exports should be fostered towards those developing countries where the consumption of commodities is likely to increase most in the future. In this connection, the possibility of increasing intra-regional commodity trade in Latin America appears particularly promising.

Some ECLAC studies suggest that such intra-regional trade could be expanded considerably. Calculations based on mid-1980s trade figures show that efforts to promote intra-regional trade in 47 products (at the SITC 5-digit level) might increase regional trade in commodities by more than US$15 billion, of which US$5.5 billion corresponds to non-oil commodities. The potential for increasing this trade was found to be particularly rich for such products as maize, wheat, sugar, soya and soya by-products, other oilseeds and oils, petroleum and petroleum products, aluminium, copper, and iron and steel. A recent meeting on the aluminium and tin industries in Latin America also showed that there was a high potential for increasing intra-regional trade in these metals without adversely affecting trade flows towards the markets outside the region and without requiring new large-scale investments (ECLAC, 1989d).

Regional cooperation is particularly necessary to remove obstacles to the growth of intra-regional trade. Prominent among these obstacles are non-tariff barriers, competition from subsidized extra-regional producers, high transport costs, insufficient or inadequate regional marketing channels and networks, and a still low level of commodity processing in Latin American countries.

Finally, a number of factors influence the environment in which technologies are developed and introduced. For a number of commodities and end-uses, the nature of material substitution means that the functional relationship between price and demand is not necessarily reversible. In such cases, when a material loses a particular market on price-competitiveness grounds, the market may be lost for ever even after such competitiveness is restored. Wide price fluctuations lead users of commodities such as jute to seek synthetic replacements whose prices are more stable. Price stability at a remunerative but not too high level should therefore be a major concern for commodity producers, whether it is pursued through producer-consumer cooperation, producer cooperation alone, or other mechanisms.

14 The increase in intra-regional trade would come about by the displacement of extra-regional producers. See ECLAC, 1986c.
The experience with commodities like aluminium underscores the importance of keeping in close contact with the industry which uses the commodity as a substantial input. Research on new end-uses and functional properties can thus be oriented towards the effective requirements—both current and anticipated—of the users. In this connection, establishing more direct commercial links between producers and end-users appears essential. This can be achieved through greater participation by producers in marketing, as analysed in section III. Trade promotion activities are complementary to research on new products and end-uses.

Indeed, substitution is a fact of economic life. The overall economic setting has an important bearing on the technological process. The replacement of cane sugar, first of all by beet sugar and then by a new breed of sweeteners, was associated with protectionist policies in sugar’s major markets. The oligopolistic structure that prevailed in the world textile industry played an important role in the substitution of synthetic fibres for natural fibres. Meeting the technological challenge therefore calls for action in several related areas, encompassing the production, marketing and market access of the commodities involved.

VI

The possibilities for Latin American cooperation in commodities

In previous sections, some measures were suggested for enhancing the contribution of commodity exports to national development objectives. In this final section, these measures are brought together and summarized, with emphasis on their practical implementation from the point of view of cooperation among countries.

1. Agents for cooperation

As indicated earlier, the new policy orientations emerging in the region encompass a trend towards the private sector playing a greater role in value-adding activities. While a debate exists on the appropriate scope and nature of government involvement, it is recognized that the State has a key catalytic role in facilitating and encouraging private sector activities, particularly in those cases where, because of externalities and market distortions frequent in the commodity area, market forces cannot be relied on to lead to effective use of resources. Governments, assisted by multilateral organizations, can play a crucial role in solving the problems referred to in earlier sections by taking direct measures such as those summarized below.

2. Objectives and measures

There are cross linkages between the measures suggested and the objectives identified for the various areas. With regard to the objective of enhancing the contribution of commodity exports to the economic development of the countries of the region, the various measures are related directly or indirectly with one or more of the following instrumental aims: increasing productivity; expanding market outlets for commodity exports, including the expansion of intra-regional trade; increasing the participation of producing countries in marketing and distribution activities; and expanding the processing of commodities before their export. The suggested measures may be grouped under the following headings:

a) Development strategy for regional resources

Actions under this heading would include: i) assistance from financial institutions in the design and evaluation of processing projects, especially joint-venture projects, and ii) the collection and dissemination of information on opportunities for joint-venture investments in commodity processing. The final goal is to facilitate commodity processing before export.

b) Actions to promote trade liberalization

These include: i) developing a common stance to negotiate the reduction of trade barriers in developed country markets; ii) removing barriers to trade in the context of regional integration agree-
ments, and iii) reducing barriers to trade with other developing regions by, for example, expanding the Global System of Trade Preferences among Developing Countries. This would contribute to the objective of expanding market outlets for raw and processed commodities, thereby facilitating processing before export.

c) Joint marketing strategy

This broad heading covers actions such as: i) the sharing of market information on individual commodities; ii) cooperative training in marketing, and assistance in this field for small Latin American firms from large firms and appropriate organizations; and iii) helping exporters to develop joint marketing arrangements in a variety of forms. Such actions would facilitate greater participation in marketing and distribution and an expansion of market outlets.

d) Common legal framework

Governments should harmonize legislation affecting operations by firms, particularly under joint ventures, in marketing and in processing, so that these are not handicapped by differing and conflicting laws and regulations in different countries. This action appears necessary in order to remove obstacles to cooperation in marketing and processing.

e) Joint research and development efforts

Although research and development efforts by Latin American firms and governments cannot match those made in developed countries, their efficiency and returns could be greatly enhanced by selectively focusing and pooling them, as indicated in section V above. Cooperation in this area would help to increase productivity, expand market outlets by finding new uses, and facilitate processing to the extent that it is now hampered by the unavailability of suitable technology.

f) Price stability

This would help to discourage the commodity substitution which adversely affects Latin American exports. Actions under this heading should be tailored to the particular situation of the commodities concerned. Commodity agreements between producers and consumers may work for certain commodities (as they have done at certain times in the cases of coffee, cocoa and natural rubber, and might in the case of oil). Producer cooperation in supply management may work in other cases (as for example those of oil and tin). At all events, the level of prices at which stability is maintained is crucial to the success of these efforts. This level should not be excessively high, as otherwise substitution will be encouraged rather than reversed, and it should correspond to long-term market trends.

3. Implementation

The effective implementation of the actions indicated above may crucially depend on the Latin American countries' leverage in international negotiations, as well as on their ability to foster suitable institutional mechanisms through intergovernmental cooperation.

a) General negotiating strategy

As was indicated some time ago in previous ECLAC documents (ECLAC, 1987b and 1983), past international cooperation between commodity producing and consuming countries has not yielded the expected results, nor has it led, in most cases, to a substantial improvement in the performance of the commodity export sector in Latin American and other developing countries. In spite of this, international dialogue and negotiation remain indispensable in the context of a world economy where interdependence among countries and sectors is constantly growing.

The piecemeal approach to commodity negotiations has in all probability been largely responsible for the lack of success of past efforts. Although UNCTAD's Integrated Programme for Commodities embodied the notion of globality of interests within the commodity sector in order to try to overcome the weaknesses of individual commodity approaches, subsequent developments such as the Uruguay Round have proved that a still wider perspective is necessary. This perspective corresponds, at the international negotiating level, to the view at the national level that the commodity sector is a component of, and is linked with, the overall economy. In the same way that effective domestic policies should try to take advantage of these linkages, so an effective negotiating strategy
should build on the interdependence existing at the international level. This implies relating problems in the commodity area to problems in other areas, such as debt and finance, trade in manufactures, services, etc.

Linking commodity issues with other matters on the basis of existing interdependencies would allow the Latin American countries to strengthen their collective bargaining position, enabling them to negotiate on a more equal footing. This type of linkage has provided the foundation for the Uruguay Round of multilateral trade negotiations and has made universal participation in that Round possible. Such an approach requires the identification and extension of negotiations to those elements which are of interest to all the parties, such as access to Latin American domestic markets, the effects of commodity production on the environment, health issues, and the production and sale of illicit drugs, all of which are highly relevant for Latin American countries as well as for the international community.

b) Institutional mechanisms

i) Producers' organizations. These are ideal mechanisms for cooperation in most of the areas indicated above. Examples in Latin America are the Union of Banana Exporting Countries (UPED) and the Group of Latin American and Caribbean Sugar-Exporting Countries (GEPACSA). These groupings are involved in activities covering most of the issues indicated, and have recorded positive results in some of these areas. Although fully-fledged producers' organizations may not be feasible for all commodities, other kinds of institutional mechanisms for consultation and cooperation among producers may be envisaged, including consultation mechanisms on specific issues.

ii) Integration schemes. In recent years, there has been a reactivation of efforts towards economic integration in Latin America, favoured no doubt by the evolution towards more open trade regimes. Integration is no longer considered a substitute for the liberalization of trade with the rest of the world, but rather a means of strengthening a competitive base from which to penetrate world markets. The prospects for trade liberalization arising from current integration plans are encouraging from the perspective of promoting intra-regional commodity trade, although there may be some diversion of trade resulting from bilateral agreements that may be concluded (such as the Enterprise for the Americas). In this context, there is a good opportunity to consider broadening the integration mechanisms to cover some of the actions indicated earlier in this article. This would mean reassessing past instruments for integration adopted in the region, particularly with a view to incorporating the private sector more effectively.

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